AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of controlling a solid-state image pickup apparatus, comprising:

a preparing step of preparing a solid-state image pickup apparatus configured to process and output an image signal output from a solid-state image sensor that converts an optical image representative of a field and focused on said solid-state image sensor by a lens to the image signal, said solid-state image sensor including a plurality of composite pixels which are arranged in a photosensitive array and each of which includes a main photosensitive cell, having a first area, and an auxiliary photosensitive cell of a same color as the main photosensitive cell, the auxiliary photosensitive cell having a second area smaller than the first area and a sensitivity lower than the main photosensitive cell, and respectively formed by a main photosensitive portion and an auxiliary photosensitive portion, a plurality of microlenses respectively positioned in said plurality of composite pixels for focusing incident light, and only a single color component filter segment positioned in each of said plurality of composite pixels, a plurality of color component filter segments being provided in a preselected color component filter pattern;

a photometry step of executing photometry with the field;

a signal processing step of processing the image signal; and

a control step of switching signal processing of said signal processing step in accordance with a result of photometry executed in said photometry step;

wherein said control step includes estimating influence of shading on the image signals from the main photosensitive cell and the auxiliary photosensitive cell based on a detected zoom position of the lens, and

wherein, in said signal processing step, color difference gain processing for the image signal is switched in accordance with the detected zoom position to thereby lower a chroma of the image signal.

2. (Original) The method in accordance with claim 1, wherein said control step variably controls the signal processing for the image signal in accordance with a focal distance of the lens.

3. (Canceled)

4. (Previously Presented) The method in accordance with claim 1, wherein in said signal processing step tone correction processing for the image signal is switched in accordance with the control of said control step.

5. (Original) The method in accordance with claim 4, wherein in said signal processing step a gamma table to use is switched in accordance with the control of said control step.

6. (Previously Presented) The method in accordance with claim 1, wherein said control step determines the shading on the basis of the result of photometry and switches the processing of said signal processing step in accordance with a result of determination.

7. (Original) The method in accordance with claim 6, wherein said photometry step executes divisional photometry with the field on the basis of the image signal output from the image sensor, and wherein said control step determines shading on the basis of a result of said divisional photometry.

8. (Previously Presented) A solid-state image pickup apparatus for processing and outputting an image signal, comprising:

a solid-state image sensor that outputs the image signal and configured to convert an optical image representative of an objective field and focused on said solid-state image sensor by a lens to said image signal, said solid-state image sensor including a plurality of composite pixels which are arranged in a photosensitive array and each of which includes a main photosensitive cell, having a first area, and a auxiliary photosensitive cell of a same color as the main photosensitive cell, the auxiliary photosensitive cell having a second area smaller than the first area and a sensitivity lower than the main photosensitive cell, and respectively formed by a main photosensitive portion and an auxiliary photosensitive portion, a plurality of microlenses respectively positioned in said plurality of composite pixels for focusing incident light, and only a single color component filter segment positioned in each of said plurality of composite pixels, a plurality of color component filter segments being provided in a preselected color component filter pattern;

a signal processor configured to process the image signal; and

a controller configured to switch signal processing of said signal processor in accordance with a result of photometry,

wherein said controller estimates influence of shading on image signals from the main photosensitive cell and the auxiliary photosensitive cell based on a detected zoom position of the lens, and

wherein said controller includes a photometry circuit configured to execute photometry with the field, said signal processor switching, under control of said controller, color difference gain processing for the image signal based on the detected zoom position to thereby lower a chroma of said image signal.

9. (Original) The apparatus in accordance with claim 8, wherein said controller variably controls the signal processing for the image signal in accordance with a focal distance of the lens.

10. (Canceled)

11. (Previously Presented) The apparatus in accordance with claim 8, wherein said signal processor switches tone correction processing for the image signal under the control of said controller.

12. (Original) The apparatus in accordance with claim 11, wherein said signal processor switches a gamma table to use under the control of said controller.

13. (Previously Presented) The apparatus in accordance with claim 8, wherein said controller determines the shading on the basis of the result of photometry and switches the processing of said signal processor in accordance with a result of determination.

14. (Original) The apparatus in accordance with claim 13, wherein said photometry circuit executes divisional photometry with the field on the basis of the image signal output from the image sensor, said controller determining shading on the basis of a result of said divisional photometry.

15. (Previously Presented) The method in accordance with claim 1, wherein the main photosensitive cell has a region provided obliquely with regard to a horizontal direction, and the auxiliary photosensitive cell is provided in a space defined by the region.

16. (Previously Presented) The apparatus in accordance with claim 8, wherein the main photosensitive cell has a region provided obliquely with regard to a horizontal direction, and the auxiliary photosensitive cell is provided in a space defined by the region.